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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,123	09/28/2001	Colin Ching-Ho Chen	60680-1395	4469

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EXAMINER
RHEE, JANE J

ART UNIT	PAPER NUMBER
1772	10

DATE MAILED: 08/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A810

Office Action Summary	Application No.	Applicant(s)	
	09/966,123	CHEN ET AL.	
	Examiner	Art Unit	
	Jane J Rhee	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore, III et al. in view of Ragland et al. (5985603).

Moore,III et al. discloses a heat shield for an under the hood vehicular engine component comprising three layers an outer metal layer (figure 5 number 32), an insulation layer (figure 5 number 30), and an inner metal layer adapted to be positioned directly proximal to a shielded component (figure 5 number 34), the insulation layer positioned intermediately between the metal layers (figure 5 number 30), the layers collectively providing thermal insulation of, and reduced noise transmission from the component. Moore, III et al. discloses that the outer metal layer of the heat shield comprises a circumferential edge boundary, wherein the boundary is folded over to encase mating edges of the insulation layer and the inner metal layer (figure 3 numbers 26, 13,16). Moore, III et al. discloses that the circumferential edge boundary of the outer metal layer of the heat shield are folded over the mating edges to avoid sharp edges and to reinforce the heat shield structure under conditions of vibration and heat (figure 3, col. 3 line 59-60). Moore, III et al. discloses that the component comprises an exhaust manifold fixed to the engine and the exhaust manifold serving to carry hot

engine gases away from the engine (figure 2 number 11). Moore, III et al. discloses a series of generally orthogonally disposed beads extending over the body of the shield (figure 2 the bent portions at the bottom of the shield). Moore, III et al. discloses a plurality of arcuate nodes positioned at the intersections of each of the orthogonally disposed beads (figure 1 the four screws). Moore, III et al. discloses that the inner metal layer is directly adjacent to the shielded component serving to reflect heat back to the shielded component (figure 5 number 34). Moore, III et al. discloses that a plurality of nodes is distributed over the body of the shield, each node having a circular shape (figure 1 the screws). Moore, III et al. discloses that the circumferential boundary edges of the outer metal layers of the heat shield are folded over the mating edges to avoid sharp edges to protect hands and fingers of than installer from contact with sharp edges (figure 3).

Moore, III et al. fail to discloses wherein at least one edge portion of the heat shield comprises outwardly flared undulations. Moore, III et al. fail to disclose that the outwardly flared undulations define protuberances space apart along the one edge portion of the heat shield.

Ragland et al. teaches at least one edge portion of the heat shield comprises outwardly flared undulations and that the outwardly flared undulations define protuberances space apart along the one edge portion of the heat shield (col. 10 lines 27-29) for the purpose of providing a strong multilayer interlocked wall which imparts surprising structural strength to the shield structure (col. 10 lines 30-32).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide Moore, III et al. with at least one edge portion of the heat shield that comprises outwardly flared undulations and that the outwardly flared undulations define protuberances space apart along the one edge portion of the heat shield in order to provide a strong multilayer interlocked wall which imparts surprising structural strength to the shield structure as taught by Ragland et al. (col. 10 lines 30-32).

Response to Arguments

2. Applicant's arguments filed 6/9/03 have been fully considered but they are not persuasive.

In response to applicant's argument that Moore et al. does not teach a series of orthogonally disposed beads extending over the body of the shield, in applicant's specification on page 5 line 3, the beads were indicated as numbers 26,28 in figure 1, and in figure 3 number 26, the beads look like bent portions of the outer metal layer 12, therefore, in the reference of Moore et al. in figure 2, the bent portions at the bottom of the shield were pointed out by the Examiner as the orthogonally disposed beads extending over the body of the shield just as applicant defines as number 26 in figure 3 of applicant's drawings.

In response to applicant's argument that Moore III et al. does not disclose that the outer metal layer 13 of the heat shield 10 is folded over to encase mating edge of the insulation layer 16 and the inner metal layer 14, the outer layer of the heat shield is folded over to encase the mating edge of the insulation layer and the inner layer in

figure 3. The edge of the inner layer 14 and the metal layer 16 are mating, the two layers are joined together at the side edges as shown in figure 3. The side edge of the inner layer 14 and metal layer 16 are encased by the boundary of the outer layer 13 as shown in figure 3. Also, applicant argues that layer 16 is not an insulating layer. Layer 16 is aluminum foil as described in col. 4 line 51, which is an insulating layer because aluminum foil reflects heat.

In response to applicants' argument that Ragland does not teach at least one edge portion of the heat shield comprising outwardly flared undulation and that the outwardly flared undulations define protuberances spaced apart along the one edge portion of the heat shield, Ragland does teach at least one edge portion of the heat shield comprises outwardly flared undulations and that the outwardly flared undulations define protuberances space apart along the one edge portion of the heat shield (col. 10 lines 27-29) for the purpose of providing a strong multilayer interlocked wall which imparts surprising structural strength to the shield structure (col. 10 lines 30-32). In response to applicant's argument that applicant teaches outwardly flared undulations in order to counteract any undesirable stiffness in the crushed metal edge imparted by dies during manufacturing of the shield 10, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a

manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jane J Rhee whose telephone number is 703-605-4959. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jane Rhee
August 11, 2003

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

8/22/03